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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,000	02/26/2004	Thomas M. Mayers	3608/2033.80621	9213

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EXAMINER	
CHEVALIER, ALICIA ANN	
ART UNIT	PAPER NUMBER
1783	
MAIL DATE	DELIVERY MODE
09/01/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,000	MAYERS ET AL.	
	Examiner	Art Unit	
	ALICIA CHEVALIER	1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 15-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

RESPONSE TO AMENDMENT

1. Claims 1-9 and 15-17 are pending in the application, claims 10-14 have been cancelled.

2. Amendments to the claims, filed on July 2, 2010, have been entered in the above-identified application.

REJECTIONS

3. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 103

4. Claims 1-9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahara et al. (U.S. Patent No. 5,753,871) in view of Baig (U.S. Patent Application Publication No. 2002/0139611) and Forry et al. (U.S. Patent No. 4,585,685).

Regarding Applicant's claim 1, Kahara discloses a cast acoustical ceiling tile (*title*) having a core made from a starch gel and mineral wool fiber composition with the starch gel ranging from 75 to 83 weight percent of the core composition and the mineral wool fibers ranging from 17 to 25 weight percent of the core composition (*col. 2, lines 33-39*). The starch gel comprises at least about 82.7 weight % water (*col. 2, lines 21-29*).

Kahara fails to disclose wherein the front surface of the tile is coated with aggregate particles.

Baig '611 discloses an acoustical ceiling tile with improved sound absorption (*title*) having a core (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) made form a starch gel (*starch binder of starch in the form of a gel, paragraph 0027*) and mineral wool fiber (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) composition, wherein the front surface of the tile is coated with aggregate particles (*calcium carbonate particle coating, paragraph 0061*).

Baig '611 further disclose that the particles are coarse (*paragraph 0061*). It is noted that Applicant defines coarse particles as to have a mean diameter of 2,500 microns (*specification page 9, lines 28-30*). Therefore, Baig '611 is deemed to disclose particles with a mean diameter of 2,500 microns, which read on Applicant's claimed aggregate particles having an average particle mean diameter of at least about 1,000 microns.

Baig '611 fails to specifically disclose the aggregate particles are pressed into the front surface.

Forry discloses an acoustically porous building material (*title*) having a core (*dry-formed web, col. 3, lines 9-10*) made form a starch gel (*organic binder pregelled starch, col. 3, lines 64-66*) and mineral wool fiber (*fibrous material mineral wool, a.k.a. rock wool, col. 3, lines 56-57*) composition, wherein the front surface of the tile is coated with aggregate particles (*col. 3, lines 11-21 and figure 1*). The aggregate particles are pressed into the front surface, which creates a relatively non-friable surface (*col. 3, lines 2-3 and figure 3*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a layer of aggregate particles as taught by Baig '611 to Kahara in order to improve sound absorption. Furthermore, it would have been obvious to one of ordinary skill in the art to press,

embed, the aggregate particles in the front surface as taught by Forry in the combination of Baig '611 and Kahara in order to make the surface relatively non-friable.

The limitation "abuse-resistant" is a functional limitation and is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and/or structure. MPEP 2145 (II).

The limitation "pressed into said surface prior to drying of the composition" is a method limitation and does not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113. Furthermore, there does not appear to be a difference between the prior art structure and the structure resulting from the claimed method because the combination of Kahara, Baig '611 and Forry discloses the same composition and structure for the claimed tile.

Regarding Applicant's claims 2 and 3, Baig '611 discloses that the aggregate particles are selected from the group consisting of calcium carbonate, crushed marble, sand, clay, perlite, vermiculite, crushed stone and glass (*page 6, paragraph [0061]*). Furthermore, the aggregate particles are specifically calcium carbonate (*calcium carbonate particle coating, page 6, paragraph [0061]*).

Regarding Applicant's claims 4 and 5, as discussed above Baig '611 is deemed to disclose aggregate particles with a mean diameter of 2,500 microns, which reads on the aggregate particles having an average particle mean diameter ranging from about 1,000 microns to about 3,000 microns, more specifically from about 1,400 microns to about 2,500 microns.

Regarding Applicant's claims 6-9, Baig '611 discloses that dual layer ceiling tile with calcium carbonate coating has a noise reduction coefficient (NRC) value of at least about 0.50 (*page 6, paragraph [0062]*).

Regarding Applicant's claims 15-17, the limitations "wherein the tile is made from wet pulp," "wherein the aggregate is pressed using a roller," and "wherein the aggregate is pressed using a plate" are method limitations and do not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113.

5. Claims 1-9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotts (U.S. Patent No. 3,184,372) in view of Baig (U.S. Patent Application Publication No. 2002/0139611) and Forry et al. (U.S. Patent No. 4,585,685).

Regarding Applicant's claim 1, Cotts discloses an acoustical ceiling tile (*col. 1, lines 13-15*) having a core made from a starch gel and mineral wool fiber composition with the starch gel ranging from 75 to 83 weight percent (*approximately 79 weight percent*) of the core composition and the mineral wool fibers ranging from 17 to 25 weight percent (*approximately 17 weight percent*) of the core composition (*col. 3, lines 61-53*). The starch gel comprises at least about 82.7 weight % water (*approximately 94 weight percent, col. 3, lines 44-50*).

Cotts fails to disclose wherein the front surface of the tile is coated with aggregate particles.

Baig '611 discloses an acoustical ceiling tile with improved sound absorption (*title*) having a core (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) made form a starch gel (*starch binder of starch in the form of a gel, paragraph 0027*) and mineral wool fiber (*fiber rich surface layer made of mineral wool fibers, paragraph 0021*) composition, wherein the front surface of the tile is coated with aggregate particles (*calcium carbonate particle coating, paragraph 0061*).

Baig '611 further disclose that the particles are coarse (*paragraph 0061*). It is noted that Applicant defines coarse particles as to have a mean diameter of 2,500 microns (*specification page 9, lines 28-30*). Therefore, Baig '611 is deemed to disclose particles with a mean diameter of 2,500 microns, which read on Applicant's claimed aggregate particles having an average particle mean diameter of at least about 1,000 microns.

Baig '611 fails to specifically disclose the aggregate particles are pressed into the front surface.

Forry discloses an acoustically porous building material (*title*) having a core (*dry-formed web, col. 3, lines 9-10*) made form a starch gel (*organic binder pregelled starch, col. 3, lines 64-66*) and mineral wool fiber (*fibrous material mineral wool, a.k.a. rock wool, col. 3, lines 56-57*) composition, wherein the front surface of the tile is coated with aggregate particles (*col. 3, lines 11-21 and figure 1*). The aggregate particles are pressed into the front surface, which creates a relatively non-friable surface (*col. 3, lines 2-3 and figure 3*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a layer of aggregate particles as taught by Baig '611 to Cotts in order to improve sound absorption. Furthermore, it would have been obvious to one of ordinary skill in the art to press,

embed, the aggregate particles in the front surface as taught by Forry in the combination of Baig '611 and Cotts in order to make the surface relatively non-friable.

The limitation "abuse-resistant" is a functional limitation and is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and/or structure. MPEP 2145 (II).

The limitations "cast" and "pressed into said surface prior to drying of the composition" are method limitations and do not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113. Furthermore, there does not appear to be a difference between the prior art structure and the structure resulting from the claimed method because the combination of Cotts, Baig '611 and Forry discloses the same composition and structure for the claimed tile.

Regarding Applicant's claims 2 and 3, Baig '611 discloses that the aggregate particles are selected from the group consisting of calcium carbonate, crushed marble, sand, clay, perlite, vermiculite, crushed stone and glass (*page 6, paragraph [0061]*). Furthermore, the aggregate particles are specifically calcium carbonate (*calcium carbonate particle coating, page 6, paragraph [0061]*).

Regarding Applicant's claims 4 and 5, as discussed above Baig '611 is deemed to disclose aggregate particles with a mean diameter of 2,500 microns, which reads on the aggregate particles having an average particle mean diameter ranging from about 1,000 microns to about 3,000 microns, more specifically from about 1,400 microns to about 2,500 microns.

Regarding Applicant's claims 6-9, Baig '611 discloses that dual layer ceiling tile with calcium carbonate coating has a noise reduction coefficient (NRC) value of at least about 0.50 (*page 6, paragraph [0062]*).

Regarding Applicant's claims 15-17, the limitations "wherein the tile is made from wet pulp," "wherein the aggregate is pressed using a roller," and "wherein the aggregate is pressed using a plate" are method limitations and do not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113.

ANSWERS TO APPLICANT'S ARGUMENTS

6. Applicant's arguments in the response filed March 19, 2010 regarding the 35 U.S.C. 103(a) rejection over Kahara or Cotts in view of Baig and Forry of record have been carefully considered but are deemed unpersuasive.

Applicant argues Forry does not teach embedding of particles as in the Applicants' invention. Applicant argues that Forry is directed towards the deposition of particles onto a dry ceiling tile that is formed using a dry-form process. Applicant further argues that amended claim 1 clarifies that the aggregate was deposited on surface of the starch gel and mineral wool composition prior to drying. Placement of the aggregate particles on the wet-laid surface results in deformity of the starch gel. The gel flows around a portion of the particle to hold it in place. Due to the presence of the wet gel, there will not necessarily be pore spaces between all of the

particles as in Forry. As a result of the diverging methods of making the product, a product having a different structure is produced.

First, claim 1 only claims the broad method limitation step of "wherein a front surface of the tile includes aggregate particles pressed into said surface prior to drying of the composition." The limitations on which Applicant relies (i.e., deformity of the starch gel and the gel flows around a portion of the particle to hold it in place) are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. Second as stated above, the limitation "wherein a front surface of the tile includes aggregate particles pressed into said surface prior to drying of the composition" is a method limitation and does not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113. Furthermore, the broad recitation of pressing the aggregate particles into the surface prior to drying of the composition does not differentiate whether the aggregate particles become entangled in the fibers of the web or if the starch gel deforms and the gel flows around a portion of the particle to hold it in place. Therefore, the combination of Kahara or Cotts in view of Baig and Forry is still deemed to obviate the claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 11:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia Chevalier/
Primary Examiner, Art Unit 1794
8/30/2010